

Claims

- [c1] 1. A heat sink fan comprising:
- a heat sink including a base member having a planar shape and a plurality of thin heat radiating fins being fixed to the base member so as to be parallel with each other;
 - a fan case attached to the heat sink to cover a upper portion of the heat radiating fins, the fan case including an upper wall portion provided with a protruding portion protruding toward the heat radiating fins from the upper wall portion;
 - an axial flow fan supported by the fan case and inducing air flow for cooling the heat sink; and
 - wherein a thickness of one or more heat radiating fins facing to the protruding portion is larger than a thickness of other heat radiating fins .
- [c2] 2. The heat sink fan according to claim 1, wherein the base member is provided with a plurality of grooves for engaging the heat radiating fins, and a depth of the grooves for engaging the heat radiating fin facing the protruding portion is greater than a depth of the grooves for engaging other heat radiating fins.

- [c3] 3. The heat sink fan according to claim 2, wherein length of the heat radiating fins is longer than length of the base member, a notch portion having a substantially trapezoid shape is provided to the heat radiating fins at the base member side, and the heat radiating fins are fixed to the base member by crimping.
- [c4] 4. The heat sink fan according to claim 1, wherein a thickness of heat radiating fins positioned at outermost side portion is larger than a thickness of other heat radiating fins except the radiating fins facing to the protruding portion.
- [c5] 5. A heat sink fan comprising:
 - a heat sink including a base member having a planar shape and a plurality of thin heat radiating fins fixed to the base member so as to be parallel with each other;
 - a fan case attached to the heat sink to cover upper portion of the heat radiating fins, the fan case including an upper wall portion provided with a protruding portion protruding toward the heat radiating fins from the upper wall portion;
 - an axial flow fan supported by the fan case and inducing air flow for cooling the heat sink; and
 - wherein a thickness of one or more heat radiating fins facing to the protruding portion is 1.5–4.0 times a thick-

ness of other heat radiating fins.

- [c6] 6. A heat sink fan comprising:
- a heat sink including a base member with a plurality of grooves and a plurality of thin heat radiating fins engaged with the grooves and being fixed to the base member;
- a fan case attached to the heat sink to cover upper portion of the heat radiating fins, the fan case including an upper wall portion provided with a protruding portion protruding toward the heat radiating fins from the upper wall portion;
- an axial flow fan supported by the fan case and inducing air flow for cooling the heat sink; and
- wherein a thickness of one or more heat radiating fins facing to the protruding portion is 1.5–4.0 times a thickness of other heat radiating fins and a depth of engagement of the heat radiating fin facing the protruding portion with the base member is 1.5–3.0 times a depth of engagement of other heat radiating fins.